

# **The U.S. DOE-Methane Hydrate R&D Program**

**Publications & Presentations of DOE  
Supported Methane Hydrate R&D**

**&**

**DOE Sponsored Student Researchers**

**U.S. DOE Methane Hydrate R&D Program  
1999-2006**

April, 2006



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## **Section I: Documentation of Support for Education**

### **Students contributing to and receiving support from DOE-funded Methane Hydrate projects: 2000-2006.**

#### ***Alaska, Anchorage, The University of*** (in conjunction with the Maurer/Anadarko project)

- Porhola, Stan, B.S.,
- Ross, Zulimacristina, M.S.,

#### ***Alaska, Fairbanks, The University of*** (in conjunction with the BP-Alaska project)

- Howe, Steven, M.S., 2004, Modeling and Economics.
- Jaiswal, Namit, M.S., 2004, Petroleum Engineering. (now at TAMU and interning for Shell on tar sands recovery)
- Kulkarni, Abhijeet, Ph.D., 2005 (now working with Shell)
- Phale, Hemant, M.S., 2006
- Stone, Chris, M.S., 2006 (starting with BP in June 2006)
- Tsunemori, Phillip, B.S., 2005, (now with ConocoPhillips)
- Westervelt, Jason, M.S., 2004, Geology.
- White, Aaron, M.S., 2003 (now is working with ConocoPhillips)

#### ***Arizona, The University of*** (in conjunction with the BP-Alaska project)

- Hennes, Andrew, M.S., 2004, Structural Geology.
- Hagbo, Casey, M.S., 2003, Geophysics.
- Zhao, Bo, M.S., 2003, Geophysics.
- Manuel, Justin, M.S., 2006, Geophysics.
- Geauner, Scott, M.S. 2006, in progress.
- Gandler, Greg, B.S., 2004.
- Peyton, Lynn, Ph.D. in progress, Geophysics
- Arca, M. Serkan, Ph.D. in progress, Geophysics
- Barker, Margaret, B.S. in progress.

#### ***California – Berkeley, University of*** (in association with LBNL)

- Elsen, Heather, Ph.D., Chemistry, in progress (expected Spring 2007)
- Kowalsky, Michael, Ph.D. 2003 (now at LBNL)
- Pruess, Jacob, B.S. in progress.
- Wu, Gordon, B.S. molecular and cellular biology, in progress (anticipated spring 2009)

#### ***Carnegie-Mellon University*** (in association with NETL/ORD)

- Howard, Kris, B.S., 2002. Chemical Engineering.

#### ***Clarkson University*** (hydrate model development project)

- Ji, Chuang, M.S., 2001.
- White, Tim, M.S., 2003.

#### ***Columbia University*** (in association with the GoM JIP)

- Cook, Ann, Ph.D. in progress, Geophysics

***Colorado School of Mines (in association with LBNL)***

- Gupta, Arvind, Ph.D. in progress, w/LBNL
- Peters, David, M.S., 2001 w/ORNL, now at Shell

***Colorado State University***

- Bolton, Robert, B.S. in progress, Biology.

***Duquesne University (in association with NETL/ORD)***

- Thomas, Dick, Ph.D. in progress, Chemistry.
- Thomas, Laura, B.S. 2005 Chemistry.

***Florida State University (in association with CMRET project)***

- Peeler, Kelly, M.S. in progress.

***Georgia Institute of Technology (in association with GoM JIP)***

- Francisca, Franco, Post-doctoral, 2002-2004. Ass't Prof in Cordova
- Lee, Jong-Sub, Post-doctoral, 2004-2005. Professor in Seoul
- Yun, Tae-Sup, Ph.D., 2005, Post-doctoral in progress.
- Lee, Joo-Yong, Ph.D., in progress.
- Narsilio, Guillermo, Ph.D., 2005.
- Martin, Ana Isabel, M.S., 2004.

***Georgia Institute of Technology (in association with the CMRET project)***

- Vogt, Frank, Post-doctoral 2002-2003, Chemistry
- Pennington, Neil, M.S., 2003, Engineering.
- Janotta, Markus, Ph.D., 2003, Chemical Engineering.
- Dobbs, Gary, Ph.D. in progress, Chemical Engineering.
- Hvozdar, L., postdoctorate, Engineering

***Houston, University of (in association with the project with Westport)***

- Ogunlana, Damilola, Post-doctorate in progress, Chemical Engineering
- Pitchumani, Ramanan, Post-doctorate in progress, Chemical Engineering
- Nanchary, Narender, M.S., 2003, Chemical Engineering
- Sun, Xuefei, Ph.D., 2004, Chemical Engineering

***Idaho, University of***

- Boyd, Stephanie, M.S., 2004, Environmental Science.

***Louisiana State University (in association with CMRET project)***

- Hackworth, Matt, Ph.D. in progress.

***Mississippi, University of (in association with CMRET project)***

- Macelloni, Leonardo, visiting scholar, Geophysics
- Giacomini, Laura, Ph.D. in progress, visiting scholar, Geology.
- Geresi, Erika, visiting scholar. Geophysics.
- Kumar, Viren, M.S., 2003.

- Grover, Tarun, M.S., 2004.
- Strack, Emily, M.S., in progress. Geological Engineering.
- Hodggers, Tyler,

***Mississippi State University (in association with CMRET project)***

- Lee, May Shia, M.S., 2001, Chemical Engineering.
- Kothapalli, Chandra, M.S., 2002, Chemical Engineering.
- Woods, Charles, M.S., 2004, Chemical Engineering.
- Dearman, Jennifer, Ph.D. in progress, Microbiology
- Zhang, Guochang, Postdoctorate, Microbiology

***North Carolina, Chapel Hill, The University of (in association with CMRET project)***

- Lapham, Laura, Ph.D. in progress.

***Oklahoma, University of (in association with Maurer Hot Ice project)***

- Tran, Tung, Ph.D. in progress, Chemical Engineering.
- Chikyala, Vikramaditya, M.S.
- Raghunathan, Ravi, Ph.D.,

***Pennsylvania State University, The (in association with NETL/ORD)***

- Lekse, Johnathan, B.S. 2004, Chemistry.

***Pittsburgh, University of (in association with NETL/ORD)***

- Rosenbaum, Eilis, M.S. 2004, Chemistry. Supporting NETL R&D w/ Parsons

***Princeton University***

***Purdue University (in association with LBNL)***

- Reiter, Paul, B.S. (Princeton 2005); Graduate in progress (Purdue)

***Rice University (in association with the Chevron JIP)***

- Hubbard, Ashley, M.S. in progress: Geochemistry
- O'Hayer, Walter, M.S. in progress; Geochemistry

***San Diego State University (Chevron JIP)***

- Lindemann, Christie, M.S., in progress.

***Scripps Institute of Oceanography (Scripps monitoring project, Chevron JIP\*)***

- Solomon, Evan, Ph.D. in progress, Marine Geochemistry-Geosciences\*
- Hangsterfer, Alexandra, Ph.D. in progress, Chemical Oceanography\*
- Solem, Christian, M.S., Marine Geochemistry
- Yishai Weinstein, Post Doctoral Fellow
- Fenwick, Rebecca, Ph.D. in progress Geosciences Division\*

***Southern Mississippi, University of (in association with CMRET project)***

- Martin, Kevin, M.S. in progress, engineering
- Johnson, Jeff, M.S. in progress, engineering

***Stanford University***

- Bandyopadhyay, Kaushik, Ph.D. Seismic and numerical modeling
- Sain, Ratnanabha, Ph.D. Seismic and numerical modeling

***Stony Brook University, New York (in association with BNL)***

- Eaton, Michael, Ph.D. in progress.
- Prasad, Kerkar, Ph.D. in progress. (also supported in MS program at UA-Fairbanks)
- Kaur, Harsimran, B.S. in progress.
- Altraide, Ibibia, M.S. in progress.

***Texas A&M University (several projects)***

- Grover, Tarun, Ph.D. in progress. Scheduled for completion 2008.
- Milkov, Alexi, Ph.D., and Post-Doctoral Researcher, Geochemistry.
- Ozgul, Ercin, M.S., 2002, Geochemistry.
- Vardaro, Michael, M.S. Geophysics

***University of Texas, Austin***

- Hernandez, Jamie, M.S. in progress Geophysics

***William and Mary, College of (in association with the Naval Research Laboratory)***

- Pohlman, J. W., Ph.D. in progress, Geochemistry.

***Woods Hole Oceanographic Institution (in association with CMRET project)\****

- Cook, Mea (current), Post-doctorate in progress.
- Camilli, Rich, (current), post-doctorate in progress.\*
- Pizzaro, Oscar, (current), post-doctorate in progress.\*

***Wyoming, The University of (in association with the Blake Ridge OBC seismic project)***

- Hornbach, Matt, Ph.D. 2004, Geophysics (post-doc at UT)
- Nealon, Jeffrey, Ph.D. in progress, Geophysics
- Gorman, Andrew, Ph.D., 2003, Geophysics – Prof. U. Otago (NZ)

**ADDITIONAL POST-DEGREE ASSIGNMENTS AT NATIONAL LABS**

***Brookhaven National Laboratory***

- Servio, Philip, 2003.

***National Energy Technology Lab***

- Link, Dirk, 2001,
- Shofield, Daniel, in progress.
- Hao, Jan, in progress.

***Oak Ridge National Lab***

- Zatsepina, Olga, 2003
- Marshall, Simon, 2000-2001. materials science
- Jones, Camille, 2000, material Sciences
- Reistenberg, Dave, post-MS, 2002-2005

- McCallum, Scott, MS, post-MS 2003, geology
- Szymcek, Phil, post-MS 2005-2006, geology
- Peters, Philip, now at Shell

***U.S. Geological Survey***

- Dugan, Brandon, now Prof at Rice U.

## **Section II: Publication of Work related to the Program's three Major Field Projects**

### **Gulf of Mexico Gas Hydrates Joint Industry Project (DE-FC26-01NT41330) *Chevron***

#### **Publications**

- Cooper, A., and P. Hart, 2003, High-Resolution Seismic-Reflection Investigation of the Northern Gulf of Mexico Gas-Hydrate-Stability Zone: *Marine and Petroleum Geology*, v. 19, p. 1275-1293.
- Dai, J., H. Xu, F. Snyder, and N. Dutta, 2004, Detection and estimation of gas hydrates using rock physics and seismic inversion; examples from the northern deepwater Gulf of Mexico: *The Leading Edge*, v. 23, p. 60-66.
- Dai, J., H. Xu, F. Snyder, and N. Dutta, 2004, Detection and estimation of gas hydrates using rock physics and seismic inversion: Examples from the northern deepwater Gulf of Mexico, in Taylor, C., and J. Kwan, eds., *Advances in the study of Gas hydrates*, eds. Taylor, CE, and Kwan, JT, *Kluwer Academic/Plenum Publishers*, pp.117-139.
- Evans, J., D. Fornari, L. Gilbert, M. Boyle, and J. Dougherty, 2005, Archive of raw bottom photographs collected during cruise P1-04-GM, northern Gulf of Mexico, June, 21-24: *U.S. Geological Survey Open-File Report 2004-1285*: USGS.
- Francisca, F., T. Yun, C. Ruppel, and J. Santamarina, 2005, Geophysical and geotechnical properties of near-surface sediments in the Northern Gulf of Mexico gas hydrate province: *Earth and Planetary Science Letters*, v. 237, p. 924-939.
- Francisca, F., J. Santamarina, and C. Ruppel, 2003, Gas hydrate in porous sediments: Experimental evidence for interparticle cementation: *Geophysical Research Letters*.
- Hart, P., D. Hutchinson, and B. Dugan, 2003, USGS conducts deepwater gas hydrate research cruise in the northern Gulf of Mexico, *Fire in the Ice* Newsletter, National Energy Technology Laboratory, Fall.
- Hart, P., D. Hutchinson, and M. Lee, 2005, High-resolution seismic-reflection data acquired in the northern Gulf of Mexico, 2003: *U.S. Geological Survey Open-File Report 2005-1411*.
- Holditch, S., and E. Jones, 2004, Protocols for Seismic Data Acquisition and Processing to Characterize Natural Gas Hydrate Deposits in Deepwater: *DOE Topical Report*, Award Number DE-FC26-01NT41330.



- Holditch, S., and E. Jones., 2002, Results from the Data Collection Workshop, Modeling Workshop, and Drilling and Coring Methods Workshop as a part of the Joint Industry Participation (JIP) Project to Characterize Natural Gas Hydrates in the Deepwater Gulf of Mexico, *DOE Topical Report*, Award Number DE-FC26-01NT41330.
- Hutchinson, D., P. Hart, C. Ruppel, F. Snyder, and B. Dugan, in review, Seismic and thermal characterization of a bottom simulating reflection in the Northern Gulf of Mexico: *AAPG Hedberg Memoir on Methane Hydrates*, submitted 1 April 2006.
- Hutchinson, D., C. Ruppel, H. Roberts, R. Carney, and M. Smith, in press, Gas hydrates in the Gulf of Mexico: in C.W. Holmes, ed., *Gulf of Mexico—Its Origin (History, Archaeology, and Geology)*, vol. 1: Texas A&M University Press, submitted December 2005.
- Kleinberg, R., and E. Jones, 2004, Measurements for assessment of hydrate related geohazards: *Topical Report*, DOE DE-FC26-01NT41330, ChevronTexaco Energy Technology Company, 30 pp.
- Schlumberger, 2003, Theoretical Modeling and analysis for gas hydrate quantification from pre-stack seismic data in the northern deepwater Gulf of Mexico. *Topical Report*, DOE DE-FC26-01NT41330, ChevronTexaco Energy Technology Company, 130 pp.
- Yun, T., G. Narsilio, J. Santamarina, and C. Ruppel, in press, Instrumented pressure testing chamber for characterizing sediment cores recovered at in situ hydrostatic pressure, *Mar. Geology*, accepted and in press.
- Yun, T., F. Francisca, J. Santamarina, and C. Ruppel, 2005, Compressional and shear wave velocities of uncemented sediment containing gas hydrate, *Geophysical Research Letters* 32, L10609, 2005. (doi: 10.1029/2005GL022607).
- Yun, T., J. Santamarina, and C. Ruppel, in review, Mechanical properties of sand, silt, and clay containing synthetic hydrate, submitted to *J. Geophys. Res.*, May 2006.
- Yun, T., G. Narsilio, and J. Santamarina, in review, Physical characterization of Gulf of Mexico sediments, *Marine and Petroleum Geology*, submitted autumn 2005.

## **Presentations**

- Birchwood, R., 2005, Wellbore Stability Model for Marine Sediments Containing Gas Hydrates: Houston, TX, American Association of Drilling Engineers National Drilling Technology Conference, April 5-7.
- Coffin, R., J. Pohlman, W. Wood, J. Gardner, R. Plummer, and J. Gettrust, 2005, Geochemical Evaluation of Piston Core Porewater on Atwater Valley, Gulf of Mexico: Variation in Vertical Methane Gradients: Eos, American Geophysical Union, San Francisco, CA., Dec. 5-9, 2005

- Collett, T., and others, 2005, Preliminary analysis of the downhole of Mexico Gas Hydrate JIP cruise (abs): EOS, American Geophysical Union, San Francisco, CA., paper OS31D-02
- Cook, A., D. Goldberg, and R. Kleinberg, 2006, Cohesive strength of gas hydrate-bearing marine sediments: The American Association of Petroleum Geologists Annual Meeting, April 9-12, 2006.
- Dai, J., N. Dutta, and H. Xu, 2006; Gas hydrate estimation using rock physics modeling and seismic inversion: American Geophysical Union Joint Assembly, Baltimore, MD, May 23-26.
- Dai, J., R. Kleinberg, H. Xu, and N. Dutta, 2005, Rock physics models of gas hydrates and their implications in seismic detection, Offshore technology conference, Houston, Texas, 2005
- Dai, J., H. Xu, F. Snyder, and N. Dutta, 2004, Detection and quantification of gas hydrates in the Gulf of Mexico: An integrated five-step workflow: EAGE, Paris, France.
- Dai, J., H. Xu, F. Snyder, L. Muller, A. Koesoemadinata, D. Gillespie, G. Wool, and N. Dutta, 2004, Physical Rock Properties of Gas Hydrate Bearing Sediments, Geophysical Modeling, Inversion and Quantitative Volumetric Estimation in the Deepwater Gulf of Mexico: Dallas, TX, The American Association of Petroleum Geologists Annual Meeting, April 18-21.
- Dai, J., R. Kleinberg, H. Xu, and N. Dutta, 2004, Seismic Detection and Quantification of Gas Hydrates: Vancouver, BC, The American Association of Petroleum Geologists Hedberg Conference, September 12-16.
- Dutta, N., J. Dai, and X. Haibin, 2004, Seismic detection and quantification of gas hydrates in the Gulf of Mexico: Florence, Italy, Second International Geological Conference August 23-27.
- Dutta, N., R. Kleinberg, J. Dai, and H. Xu, 2005, Natural gas hydrates estimation using seismic inversion and rock physics: American Geophysical Union, New Orleans, LA.
- Dutta, N., H. Xu, and J. Dai, 2005, Seismic detection and quantification of gas hydrate using rock physics and inversion, *PetroTech. New Delhi, India*, January 15-19.
- Dutta, N., 2005, Emerging technology application aimed at characterization of gas hydrates and free gas underneath BSR: 2nd International Congress on Geosciences in Petroleum Industry, AMGE, September 4-7.
- Dutta, N., J. Dai, and H. Xu, 2004, Seismic detection and quantification of gas hydrates in the Gulf of Mexico, 32nd International Geological Conference, August 23-27, 2004, Florence, Italy, August 23-27.

- Dutta, N., L. Muller, J. Dai, and R. Utech, 2003, Seismic Detection of Gas Hydrates: American Association of Petroleum Geologists International Conference.
- Hagen, R., J. Gardner, and W. Wood, 2004, Thermal Measurements Over Hydrate Mounds in Atwater Valley, Gulf of Mexico: San Francisco, CA, American Geophysical Union Annual Fall Meeting, December, 13-17.
- Hart, P., D. Hutchinson, G. Dugan, M. Fowler, W. Wood, F. Snyder, N. Dutta, R. Coffin, J. Gardner, R. Hagen, R. Evans, and D. Fornari, 2005, A multidisciplinary investigation of a deepwater gas hydrate mound, Atwater Valley, northern Gulf of Mexico: Fourth International Workshop on Methane Hydrate R&D, Victoria BC., May 9-11.
- Hutchinson, D., C. Ruppel, J. Pohlman, P. Hart, B. Dugan, F. Snyder, and R. Coffin, 2004, An integrated geological, geophysical, and geochemical analyses of subsurface gas hydrates in the northern Gulf of Mexico: Vancouver, BC, The American Association of Petroleum Geologists Hedberg Research Conference, September 12-16.
- Hutchinson, D., F. Snyder, P. Hart, C. Ruppel, J. Pohlman, W. Wood, R. Coffin, and M. Edwards, 2005, Geologic and site survey setting for JIP Gulf of Mexico gas hydrate drilling, AGU Fall Meeting 2005.
- Hutchinson, D., C. Ruppel, J. Pohlman, P. Hart, F. Snyder, N. Dutta, B. Dugan, and R. Coffin, 2005, Geophysical and geochemical characterization of the hydrate stability zone in a region of active salt tectonics, Keathley Canyon, Northern Gulf of Mexico, 4th International Hydrates Conference, Victoria, May 2005.
- Hutchinson, D., P. Hart, C. Ruppel, F. Snyder, N. Dutta, W. Wood, J. Pohlman, B. Dugan, M. Fowler, R. Evans, D. Fornari, and R. Coffin, 2005, Multidisciplinary studies contrasting gas hydrate occurrence at two sites in the northern Gulf of Mexico, Offshore Technology Conference, Spring 2005.
- Hutchinson, D., P. Hart, F. Snyder, M. Lee, N. Dutta, L. Muller, B. Dugan, C. Ruppel, W. Wood, R. Coffin, R. Evans, and E. Jones, 2003, Evidence of subsurface gas hydrate in the northern Gulf of Mexico: American Geophysical Union, Fall Meeting.
- Jones, E., 2006, Overview of GOM JIP Leg 1 Drilling: ECI Science and Technology Issues in Methane Hydrate R&D: Kauai, HI, March 5-9, 2006.
- Jones, E., 2005, Pre-cruise Estimates of Sediment Properties for the 2005 ChevronTexaco et al Gulf of Mexico Gas Hydrate Research Coring Project: Vancouver, BC, The American Association of Petroleum Geologists Hedberg Conference, September 12-16.
- Jones, E. and S. Holditch, 2005, Pre-cruise Estimates of Sediment Properties for the 2005 ChevronTexaco Gulf of Mexico Gas Hydrate Research Coring Project: Houston, TX, Offshore Technology Conference, May 2-5.

- Jones, E. and S. Holditch, 2003, Characterizing Natural Gas Hydrates in the Deep Water Gulf of Mexico: Yokohama, Japan, 4th International Conference on Gas Hydrates, May 19-23.
- Lorenson, T., and others, 2005, Preliminary results from the ChevronTexaco Gulf of Mexico Gas Hydrates JIP: Hydrocarbon Gases in Sediments (abs): EOS, American Geophysical Union, paper OS42A-04.
- Pohlman, J., C. Ruppel, D. Hutchinson, P. Hart, R. Plummer, D. Kniew, K. Grabowski, and R. Coffin, 2005, The effects of mass deposition, gas flux and salt diapirs on surface sediment geochemistry in Keathley Canyon (northern Gulf of Mexico), AGU Fall Meeting, 2005.
- Pohlman, J., W. Wood, T. Boyd, R. Coffin, C. Ruppel, D. Hutchinson, P. Hart, and B. Dugan, 2004, Interstitial sulfate gradients as indicators of gas hydrates: How reliable are they?, International Geological Conference, Florence, Italy, Summer 2004 meeting.
- Ruppel, C., D. Hutchinson, B. Dugan, and P. Hart, 2004, Predicting the subsurface distribution of gas hydrate in the Northern Gulf of Mexico, Amer. Assoc. Petroleum Geologists, spring 2004 meeting.
- Santamarina, J., T. Yun, J. Lee, A. Martin, F. Francisca, and C. Ruppel, Mechanical, 2005, thermal and electromagnetic properties of hydrate-bearing clay, silt, and sand at various confining pressures, AGU Fall Meeting 2005.
- Santamarina, J., F. Francisca, T. Yun, J. Lee, A. Martin, and C. Ruppel, 2004, Mechanical, thermal, and electrical properties of hydrate-bearing sediments, invited extended abstract, AAPG Hedberg Conference, September 2004.
- Santamarina, J., C. Ruppel, J. Lee, T. Yun, F. Francisca, and A. Martin, 2005, Physical Properties of Hydrate Bearing Porous Sediments: Trondheim, Norway, Fifth International Conference on Gas Hydrate, June 13-16.
- Smith, M., 2004, Seismic Prediction and Operational Results for Gulf of Mexico Wells in Gas-Hydrate Areas: Vancouver, BC, The American Association of Petroleum Geologists Hedberg Conference on Gas Hydrates, September 12-16.
- Smith, M. and W. Shedd, 2004, Effects of Gas Hydrate on Seafloor and Borehole Stability in the Deepwater Gulf of Mexico – Seismic Prediction and Drilling Results: Dallas, TX, The American Association of Petroleum Geologists Annual Meeting, April 16-21.
- Smith, M., W. Shedd, and J. Hunt, 2003, Identification of Deepwater Gulf of Mexico Gas Hydrates – From Seismic Prediction to Joint Industry Project Drilling and Coring: Barcelona, Spain, The American Association of Petroleum Geologists International Conference, September 21-24.

- Smith, M., W. Kou, A. Ahmed, and R. Kuzela, 2005, The Significance of Gas Hydrate as a Geohazard in Gulf of Mexico Exploration and Production: Houston, TX, Offshore Technology Conference, May 3.
- Snyder, F., L. Muller, N. Dutta, D. Hutchinson, P. Hart, M. Lee, B. Dugan, C. Ruppel, W. Wood, R. Coffin, R. Evans, and E. Jones, 2004, Seismic analysis and characterization of gas hydrates in the northern deepwater Gulf of Mexico, Amer. Assoc. Petroleum Geologists, spring 2004 meeting.
- Snyder, F., 2005, Seismic analysis and characterization of gas hydrates in the northern deepwater Gulf of Mexico: Dallas, TX, The American Association of Petroleum Geologists Annual Meeting, April 16-21
- Winters, W., W. Waite, I. Pecher, D. Mason, D. Hutchinson, L. Gilbert, R. Birchwood, S. Noeth, and E. Jones, 2004, Comparison of methane gas hydrate formation on physical properties of fine- and coarse-grained sediments: American Association of Petroleum Geologists Hedberg Research Conference, Vancouver, BC September 12-16.
- Wood, W., P. Hart, R. Coffin, J. Gardner, and J. Gettrust, J., High Resolution Seismic Images of the Gulf of Mexico Joint Industry Program Drilling Transect: American Geophysical Union, San Francisco, CA., Dec. 5-9, 2005.
- Wood, W., D. Hutchinson, P. Hart, F. Snyder, C. Voss, N. Dutta, L. Muller, M. Lee, J. Gardner, B. Dugan, C. Ruppel, R. Coffin, R. Evans, and E. Jones, 2003, Constraints on Subsurface gas and gas Hydrate Distribution in a Gulf of Mexico Mound: EOS, Transaction, American Geophysical Union, v. 84, San Francisco, CA, Dec. 8-12.
- Wood, W., J. Gardner, R. Hagen, R. Coffin, J. Pohlmann, P. Hart, and D. Hutchinson, 2004, Modeling heat and fluid flux of seafloor mounds in the Gulf of Mexico: Eos, Transactions: American Geophysical Union, v. 85, n. 47.
- Yun, T., G. Narsilio, J. Lee, J. Santamarina, and C. Ruppel, 2005, Physical properties of a Keathley Canyon pressure core maintained at In Situ pressure and measured in a new instrumented pressure testing chamber, AGU Fall Meeting 2005.

**Alaska North Slope Gas Hydrate Reservoir Characterization (DE-FC26-01NT41332) *BP Exploration Alaska, Inc.***

**Publications**

- Hunter, R., 2004, Characterization of Alaska North Slope Gas Hydrate Resource Potential: *DOE-NETL Fire in the Ice Newsletter*, Spring 2004, pp. 1-5.

Lee, M., 2005, Well Log Analysis to Assist the Interpretation of 3-D Seismic Data at Milne Point, North Slope of Alaska: *United States Geological Survey Scientific Investigations Report*, 2005-5048.

Lee, M., and T. Collett, 2005, Controls on the Physical Properties of Gas-Hydrate-Bearing Sediments Because of the Interaction between Gas Hydrate and Porous Media: *United States Geological Survey Scientific Investigations Report* 2005-5143.

Lee, M., T. Collett, and T. Inks, in press, Seismic attribute analysis for gas-hydrate and free-gas prospects on the North Slope of Alaska, in Collett, T., and A. Johnson, eds., *Natural Gas Hydrates: Energy Resource and Associated Geologic Hazards*, AAPG Hedberg Special Publication, 27 ms. pp.

### **Presentations**

Boswell, R., 2006, Status of DOE/BP Gas Hydrate Resource Characterization, Milne Point, Alaska North Slope: ECI Science and Technology Issues in Methane Hydrate R&D: Kauai, HI, March 5-9, 2006.

Casavant, R., 2004, Reservoir-Fluid Characterization and Reservoir Modeling of Potential Gas Hydrate Resources, Alaska North Slope: Calgary, AB, Canadian Society of Petroleum Geologists Technical Conference, June 1.

Casavant, R., A. Hennes, R. Johnson, and T. Collett, 2004, Structural analysis of a proposed pull-apart basin: Implications for gas hydrate and associated free-gas emplacement, Milne Point Unit, Arctic Alaska: Vancouver, AB, The American Association of Petroleum Geologists Hedberg Conference, September 12-16.

Digert, S., 2005, Perspective on ANS methane gas hydrate, Alaska Division of Natural Resources, Alaska Gas Workshop, Anchorage, AK, August 17-18.

Gandler, G., R. Casavant, R. Johnson, C. Glass, and T. Collett, 2004, Preliminary Spatial Analysis of Faulting and Gas Hydrates-Free Gas Occurrence, Milne Point Unit, Arctic Alaska: Vancouver, AB, The American Association of Petroleum Geologists Hedberg Conference, September 12-16.

Geauner, S., J. Manuel, R. Casavant, C. Glass, and K. Mallon, 2004, Well Log Normalization and Comparative Volumetric Analysis of Gas Hydrate and Free-Gas Resources, Central North Slope, Alaska: Vancouver, AB, The American Association of Petroleum Geologists Hedberg Conference, September 12-16.

Geauner, S., J. Manuel, and R. Casavant, 2003, Preliminary subsurface characterization and modeling of gas hydrate resources, North Slope, Alaska, in: *Student Abstract Volume*, 2003 AAPG-SEG Student Expo, Houston, Texas.

- Hagbo, C., and R. Johnson, 2003, Use of seismic attributes in identifying and interpreting onshore gas-hydrate occurrences, North Slope, Alaska: San Francisco, California, EOS Transaction, American Geophysical Union, v.84, Fall Meeting Supplement, Abstract OS42B-06, December 8-12.
- Hennes, M., R. Johnson, and R. Casavant, 2004, Seismic Characterization of a Shallow Gas-Hydrate-Bearing Reservoir on the North Slope of Alaska: Vancouver, BC, The American Association of Petroleum Geologists Hedberg Conference, September 12-16.
- Howe, S., N. Nanchary, S. Patil, S. Ogbe, G. Chukwu, R. Hunter, and S. Wilson, 2004, Economic Analysis and Feasibility Study of Gas Production from Alaska North Slope Gas Hydrate Resources: Vancouver, AB, The American Association of Petroleum Geologists Hedberg Conference, September 12-16.
- Hunter, R., T. Collett, S. Patil, R. Casavant, and T. Mroz, 2004, Characterization, Appraisal and Economic Viability of Alaska North Slope Gas Hydrate Accumulations: Vancouver, AB, The American Association of Petroleum Geologists Hedberg Conference, September 12-16.
- Hunter, R., 2005, Evaluation and modeling of Alaska North Slope gas hydrate resource potential: Alaska Division of Natural Resources, Alaska Gas Workshop, Anchorage, AK, August 17-18.
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## Section V: Publications resulting from Interagency

**Agreements** (*note additional publications by the agencies are included under “major field projects where appropriate”*)

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